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SOME MYRMELEONIDÆ AND ASCALAPHIDÆ FROM COREA.

By

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I have examined a great many specimens of *Myrmeleonidae* and *Ascala-phidae* from Corea in my collection, collected by my friends Messrs. Y. Hase-GAWA, T. KURISUE, S. MARUTA, K. DOI, T. KANBE, and myself. Among several interesting species, I found one new and several unrecorded species. The followings are the notes and descriptions of these.

I. MYRMELEONIDAE.

1. Dendroleon jezoënsis OKAMOTO

Dendroleon jezoënsis OKAMOTO, Wiener Ent. Ztg., p. 280, fig. 5, 5a (1910).

LOCALITY: Mt. Chii, 19 in alcohol, T. KANBE, August, 1924.

This species is very rare in both Corea and Japan proper, and this is the first time recorded from the former country. It may be easily separated from the other species by its fine marked wings.

2. Glenuroides japonicus (MacLachlan)

Glenurus (?) japonicus MACLACHLAN, Linn. Journ. Zool., p. 248 (1867).

Glenuroides communis OKAMOTO, Wiener Ent. Ztg., p. 295, fig. 4, 4a (1910).

LOCALITY: Shakuôji, near Gensan, 1 & , 3 \varphi in alcohol, Y. HASEGAWA, July, 1921; Mt. Hakuyo, 1 \varphi in alcohol, Y. HASEGAWA; Mt. Kongo, 9 \varphi, 2 \varphi in alcohol, H. Okamoto, July to August, 1924; Mt. Chii, 3 \varphi, 2 \varphi in alcohol, Y. HASEGAWA and S. MARUTA, July to August, 1924.

This species is very common in Corea, but this is the first record from there. It is also found in Japan proper and Formosa. It is easily recognized by its long and slender antennae, and the marking of the hind wing.

3. Distoleon lineatus (FABRICIUS)

Myrmeleon lineatus FABRICIUS, Ent. Syst. Suppl., p. 205 (1798).

Myrmeleon ornatum OLIVIER, Encycl. Meth. VIII, p. 123 (1825).

Myrmeleon sibiricus Frischer von Waldheim, Entomogr. IV, p. 45, t. 1, fig. 2; t.2, fig. 7 (1845-49). Distoleon lineatus Kuwayama, Ins. World, p. 82, in Japanese (1924).

LOCALITY: Heijo, 2 &, 1 &, K. Doi, May, 1920; Sharei, 1 &, 1 & in alcohol, Y. Hasegawa, August, 1922; Suigen, 1 & in alcohol, T. Kurisue, May, 1923; Sharei, 2 &, 1 & in alcohol, Y. Hasegawa and T. Kanbe, July, 1923; Mt. Suri, near Suigen, 2 & in alcohol, T. Kanbe, June, 1924; Mt. Kongo, 1 & in alcohol, H. Okamoto, July, 1924.

Very common in Corea, but it has not yet been found in Japan proper. It is easily recognized by its wing venation which is largely yellow.

4. Distoleon tetragrammicus (FABRICIUS)

Myrmeleon tetragrammicus FABRICIUS, Ent. Syst. Suppl., p. 205 (1798).

Myrmeleon catta Rossi, Fauna Etrusc. II, 15, 692 (1790).

Myrmeleon rapax OLIVER, Encycl. Meth. VIII, 123, 12 (1825).

Myrmeleon flavomaculatus EVERSMANN, Bull. de Moscou, XIV, p. 358, pl. VI, ffg. 5 (1841).

Formicaleo nigricans OKAMOTO, Wiener Ent. Ztg., p. 288, fig. 3 (1910).

Formicaleo Leuthneri NAVAS, Memorias, p. 208 (1914).

LOCALITY: Heijo, 23, K. Doi, July, 1919; Shakuðji, near Gensan, 58 in alcohol, Y. Hase-Gawa, July, 1921; Mt. Kongo, 58 in alcohol, H. Okamoto, July to August, 1924.

This species seems to be common in Corea, and is new to the insect fauna of that country.

5. Distoleon contubernalis (MacLachlan)

Formicaleo contubernalis MacLachlan, Trans. Ent. Soc. Lond., p. 175 (1875).

LOCALITY; Heijo, 1 9, K. Doi, August, 1919; Mt. Chii, 1 9 in alcohol, Y. HASEGAWA and S. MARUTA, August, 1923.

This is an unrecorded species from Corea, previously known to occur only in Japan proper.

6. Euroleon coreanus n. sp.

Blackish. Vertex raised, croceous with six irregular large black spots, three of which are transversely situated at the anterior margin, the rest at the posterior margin, and two spots in the middle being slightly interrupted by the median furrow. Face above black and shining, behind croceous with a blackish brown quadrangular spot in the middle; a yellowish ring around eye. Maxillary palpi blackish brown, the two basal joints yellowish; labial palpi blackish brown, its inside, with exception of fusiform last joint, yellowish. Antennae fulvous brown, the two basal joints blackish brown.

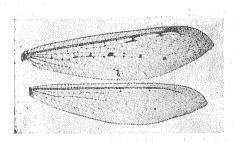
Prothorax short, broader than long; blackish brown, with lateral margins and a longitudinal median streak yellow. Meso- and metathorax blackish dorsally and ventrally.

Abdomen blackish, with paler pleurae; the hind border of some apical abdominal segments narrowly margined with yellow. In the male the last segment (tenth segment or the upper part of genitalia) short, split behind, its hind border clothed with blackish long hair, and many black bristles on the ventral part; two short cylindrical processes (the hind part of gentalia) with a few very long hair projected from the ventral part of eighth segment, and a little wedge-shaped blackish appendage present on the eighth sternite. In the female the last segment larger than that of the male, normal, without bristles, and no process.

Legs somewhat slender, with black bristles; coxae black; femora blackish brown, the upper and bind sides of the anterior and middle femora yellowish; tibiae blackish brown with yellowish upper sides; tarsal joints black, with yellowish brown basal joint, the latter being shorter than the apical one; spurs

hardly as long as the basal tarsal joint, being nearly straight.

Wings hyaline; markings dark brown; three to four spots along R and Rs



Fore and hind wings of Euroleon coreanus n. sp. × 1.5

of the fore wing (in some specimens these are not conspicuous), four to six between Mr and Cura, and one united point of Curp and Cura. Hind wing no marking; anterior and posterior margins as well as nervures of both wings yellow, the latter interrupted by blackish brown; Sc, R, Rs, Mr, Cur and Cur more or less distinctly blackish banded; pterostigma yellowish white, basally blackish brown. In the fore wing Rs arises further out than the level of the fork of Cur; the angle between Cura and Curp acute and enclosing two or three rows of cells; the

second branch from Cuia arises further before the end of Cuip; Cuip almost parallel with Cui, its apical part strongly curved. Posterior Banksian line present. In the hind wing the angle between Mii and Mii acute and enclosing two rows of cells, the second branch from Mii arises further before at the level of the end of Mii Mii almost parallel with Cui, its apical part strongly curved. Posterior Banksian line present. Cross vein present in the apical area of both wings. In the radial area of the hind wing with four to six cross veins before the origin of Rii.

Body 26 (φ) to 30 ($\hat{\sigma}$) mm.; fore wing 27 ($\hat{\varphi}$) to 31 ($\hat{\sigma}$) mm.; hind wing 25 ($\hat{\varphi}$) to 30 ($\hat{\sigma}$) mm.

LOCALITY: Keijo, 1 \(\rho\), K. Doi, July, 1915; Heijo, 2 \(\hat{\cappa}\), 1 \(\rho\), K. Doi, July, 1915; Yukirei, 1 \(\hat{\cappa}\), in alcohol, Y, Hasegawa, August, 1922; Sharei, 4 \(\hat{\cappa}\), 2 \(\phi\) in alcohol, H. Okamoto and Y, Hasegawa, August, 1922; Mosan, 1 \(\hat{\cappa}\) in alcohol, T. Kanbe, July, 1923; Mt. Kongo, 1 \(\hat{\cappa}\) in alcohol, H. Okamoto, July, 1924; Heijo, 1 \(\hat{\cappa}\), 1 \(\hat{\cappa}\) in alcohol, T. Kanbe, August, 1924.

At first sight this species resembles *Euroleon europaeus* MacLachlan, which is found throughout the greater part of Europe and in Caucasus, and *Euroleon polyspilus* Gerstaecker, which is found in the Amur, but the markings of the wing and the genitalia of the male easily serve to separate these species.

This is the first species of this genus so far found in Corea, and it seems to be common in that country.

7. Hagenomyia micans (MacLachlan)

Myrmeleon micans MacLachlan, Traus. Ent. Soc. Lond., p. 176 (1875). LOCATITY: Shakuôji, near Gensan, 2 %, 1 % in alcohol, Y. Hasegawa, July, 1921; Shakuôji, 2 φ in alcohol, T. Kurisue, July, 1922; Shakuôji, 1 φ in alcohol, H. Okamoto, June, 1923; Mt. Chii, 2 δ in alcohol, Y. Hasegawa, T. Kanee and S. Maruta, July to August, 1924; Mt. Kongo, 4 δ, 12 φ in alcohol, H. Okamoto, July, 1924.

Very common in Corea, and also found in Japan proper, Riukiu and Formosa. This is an unrecorded species from Corea.

8. Myrmeleon formicarius Linné

Myrmeleon formicarius LINNF, Syst. Nat. XII, p. 914, 3 (1767).

Myrmeleon formicalynx LINNÉ, Syst. Nat. XII, p. 914, 4 (1767).

Myrmeleon formicalynx BURMEISTER, Handb. Entom., II, p. 994, n. 4 (1839).

Myrmeleon innotatus RAMBUR, Névroptères, p. 406 (1842).

LOCALITY: Suigen, 6 $_{\circ}$, 1 $_{\circ}$ in alcohol, H. Okamoto, Y. Hasegawa and T. Kurisue, May, 1922; Sharei, 1 $_{\circ}$ in alcohol, Y. Hasegawa, August, 1922; Gesseiji, 1 $_{\circ}$ in alcohol, S. Maruta, September, 1923; Mt. Chii, 2 $_{\circ}$ in alcohol, Y. Hasegawa and S. Maruta, August, 1924; Mt. Kongo, 29 $_{\circ}$, 10 $_{\circ}$ in alcohol, H. Okamoto, July to August, 1924.

This species is widely spread in Corea, though this is the first time recorded from that country. The writer possesses a many specimens from different localities of Corea.

9. Acanthaclisis japonica MacLachlan

Acanthaclisis japonica MACLACHLAN, Trans. Ent. Soc. Lond., p. 174 (1875).

LOCALITY: Mt. Kongo, 12 %, 7 % in alcohol, H. Okamoto, July to August, 1924; Mt. Chii, \mathbf{t} % in alcohol, Y. Hasegawa and S. Maruta, July, 1924.

This is an unrecorded species from Corea, previously known to occur only in Japan proper (Hokkaido, Honshu).

II. ASCALAPHIDAE.

1. Ascalaphus sibiricus Eversmann

Ascalaphus sibiricus Eversmann, Bull. Soc. Impér. Natural. Moscou, p. 279, tab. 5, f. 2 ♀ (1850); Van der Weele, Ascalaphiden, Col. Zool. Selys Longch., p. 294, t. II (1918); Navas, Arxius de l'Ins. Ciencies, t. I, n. III, p. 85 (1913); Kuwayama, Ins. World, vol. 24, no. 271, p. 82, in Japanese (1920).

Ascalaphus radians GERSTAECKER, Mitt. Natur. Ver. Neu-Vorpomm. u. Rügen, Bd. II, p. 8 (1884).

LOCALITY: Heijo, 3 \(\text{P} \) K. Doi, May, 1919; Suigen, 1 \(\text{S} \), 1 \(\text{Q} \) in alcohol, Y. Hasegawa, June, 1922; Shaku\(\text{D} \) ji, 3 \(\text{Q} \) in alcohol, H. Okamoto, June, 1923; Sharei, 1 \(\text{S} \), 6 \(\text{Q} \) in alcohol, T. Kanbe, July, 1923; Mt. H\(\text{D} \) ky o near Suigen, 1 \(\text{S} \), 3 \(\text{Q} \) in alcohol, T. Kurisue, May, 1924.

This species is allied to Ascalaphus italicus FABRICIUS, which is found in Italy, and Ascalaphus ramburi MacLachlan, which occurs only in Japan proper, but it is easily recognized by its light yellow hind wing with two oblique blackish brown bands.

This palaearctic species is very common in the northern Corea, but has not yet been found in the southern part.

2. Hybris subjacens (WALKER)

Ascalaphus subjacens WALKER, Cat. Brit. Mus. Neuropt., p. 431, n. 44 9 (1853).

Hybris subjacens MacLachlan, Journ. Linn. Soc. Zool. p. 267 (1871); Okamoto, Bull. Agr. Exp. Sta. Gov. Gen. Chosen, Vol. I, no. 2, p. 71 (1924).

Ascalaphus remctus Walker, Cat. Brit. Mus. Neuropt., p. 447, n. 71, Q (1853).

LOCALITY: Quelpart Island, 19, Y. Matsuse, August, 1922; Mt. Chii, 29 in alcohol, Y. Hasegawa and S. Maruta, July to August, 1924; Moppo, 13, 29 in alcohol, T. Kanbe, July, 1924.

This oriental species is common in the southern Corea as well as on Quelpart Island, but has not yet been found in the northern part.

朝鮮産蛟蜻蛉科及び長角蜻蛉科に就て 農學博士 岡本半次郎

要

蛟 蛉 蜻 科

本科に屬する朝鮮産のものは次の九種にして、その中一種は新種なり。

I. Dendroleon iezoensi	з Окамо	TO
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Glenuroides japonicus MACLACHLAN

Distoleon lineatus FABRICIUS 3.

4. Distoleon tetragrammicus FABRICIUS

5. Distoleon contubernalis MACLACHLAN

6. Euroleon coreanus OKAMOTO

7. Hagenomyia micans MACLACHLAN Myrmeleon formicarius LINNÉ

9. Acanthaclisis japonica MACLACHLAN

ゴマダラウスパカゲロウ

ホシウスバカゲロウ

キガスリウスパカゲロウ

カスリウスパカゲロウ

コガスリウスバカゲロウ

テフセンウスパカゲロウ

ウスパカゲロウ

コウスパカゲロウ

オホウスバカゲロウ

長角蜻蛉科

本科に屬するものには次の二種あり。

I. Ascalaphus sibiricus EVERSMANN

2. Hybris subjacens WALKER

センキバネツノトンポ

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